



## 18F1B Resin Family Linear Low-Density Polyethylene Resin

### Technical Data Sheet



#### Product Description

Shell Polymers 18F1B resin family are 1-butene LLDPE blown film resins.

#### Grades

18F1B

18F1B1

18F1B2

#### Additive Packages

Thermal Stabilizer

Thermal Stabilizer, Talc Antiblock (6000 ppm)

Thermal Stabilizer, Talc Antiblock (6000 ppm),  
& Erucamide Slip (1200 ppm)



#### Highlights

- Produces films that have good drawdown, tensile and toughness
- Gas phase technology

Resin Properties	Method	Nominal Value
Density	ASTM D792	0.918 g/cm <sup>3</sup>
Melt Index (190°C / 2.16 kg)	ASTM D1238	1.0 g/10 min

Mechanical Properties	Method	Nominal Value (English)	Nominal Value (SI)
Thickness		1.0 mil	25 µm
Tear Strength, MD	ASTM D1922	115 g	115 g
Tear Strength, TD	ASTM D1922	420 g	420 g
Dart Drop Impact	ASTM D1709	90 g	90 g
Tensile Strength at Break, MD	ASTM D882	7100 psi	49 MPa
Tensile Strength at Break, TD	ASTM D882	5500 psi	38 MPa
Tensile Strength at Yield, MD	ASTM D882	1600 psi	11 MPa
Tensile Strength at Yield, TD	ASTM D882	1600 psi	11 MPa
Tensile Elongation at Break, MD	ASTM D882	670 %	670 %
Tensile Elongation at Break, TD	ASTM D882	990 %	990 %
1% Secant Modulus, MD	ASTM D882	21800 psi	150 MPa
1% Secant Modulus, TD	ASTM D882	24700 psi	170 MPa

Optical Properties	Method	Nominal Value (English)	Nominal Value (SI)
Haze	ASTM D1003	16 %	16 %
Gloss at 45°	ASTM D2457	35	35

Thermal Properties	Method	Nominal Value (English)	Nominal Value (SI)
Vicat Softening Temperature	ASTM D1525	213 °F	101 °C
Peak Melting Temperature	ASTM D1525	251 °F	122 °C

**Processing Statement:**

Film properties are typical for blown film produced on a line with 75mm screw, 250mm die diameter, and 2mm die gap. Properties will vary with process conditions.

**Regulatory Statement:**

- Complies with U.S. FDA 21 CFR 177.1520 (c) 3.1a or 3.2a
- Consult the Regulatory Data Sheet for more details. It is available upon request. Please contact your Account Manager.

[www.shell.us/polymers](http://www.shell.us/polymers)

**Legal Disclaimer:** All products purchased or supplied by Shell Chemicals are subject to terms and conditions set out in the contract, order acknowledgment and/or bill of lading. Shell Chemicals warrant that their product will meet those specification designates as such herein. All other information, including that herein, supplied by Shell Chemicals is considered accurate but is furnished upon the express condition that the customer shall make its own assessment to determine the products' suitability for a particular purpose. Shell Chemicals make no other warranty either express or implied, regarding such other information, the data upon which the same is based, or the results to be obtained from use thereof; that any products shall be merchantable or fit for any purpose; or that the use of such other information or product will not infringe any patent. Each company should decide based upon their own decision-making process to apply the guidance contained in this document, in full, partly or to adopt other measures, and each company remains responsible for all determinations regarding any use of products, processes or materials described herein and for product and equipment in its possession and control. Specific procedures and requirements must adhere to applicable law and regulatory standards. The expression 'Shell' or 'Shell Polymers' refers to the companies of the Shell Group that are engaged in chemical businesses. Each of the companies that make up the Shell Group of companies is an independent entity and has its own separate identity.

